



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------|------------------------|
| 10/628,259 | 07/29/2003 | Jih-Ru Hwu | 21927-003001 / PB920114 | 5436 |
| 69713 7590 08/22/2007 OCCHIUTI ROHLICEK & TSAO, LLP 10 FAWCETT STREET CAMBRIDGE, MA 02138 | | | EXAMINER PAK, JOHN D | |
| | | | ART UNIT 1616 | PAPER NUMBER |
| | | | MAIL DATE 08/22/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/628,259

Applicant(s)

HWU ET AL.

Examiner

JOHN PAK

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15, 17, 18 and 23-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15, 17, 18 and 23-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Art Unit: 1616

Claims 15, 17-18 and 23-37 are pending in this application.

Applicant's election without traverse of group V in the response filed on 6/4/2007 is acknowledged. Accordingly, claims 15, 17-18 and 23-37 will presently be examined to the extent that they read on the elected invention group. Applicant is requested to amend the independent claims to reflect the election without traverse so that "M" in component A is defined as Fe only, with appropriate corresponding changes.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15, 17, 18, 23-28, 29-30, 32-33 and 35-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(1) The rejected claims here recite or read on "general formula" without correcting this deficiency. A "general formula" leaves undefined what else could be encompassed by the formula. The claims are therefore indefinite.

(2) For X in component A, "percholate" appears to be an error. There is no anion known as "percholate." File Registry in Chemical Abstracts Service database has 0 hits for any substance with that term in any part of its nomenclature.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15, 17-18 and 23-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002-284667 in view of Medline abstract 2001149154, HCAPLUS abstract 2002:570068, HCAPLUS abstract 2003:206436, Medline abstract 85057613, and Medline abstract 2002276939.

JP 2002-284667 discloses a skin disinfectant/liniment that contains as little as 10^{-7} % up to 5% trivalent iron salt, ascorbic acid or its salt, and other antiseptics or germicides¹. See **JPAB abstract JP02002284667A**. See also machine translation of claim 1. Amount of ascorbic acid can be 2% or less (see machine translation of claims 2-3.)

Medline abstract 2001149154 discloses wound healing to be a complex process involving variety of interactions, but application of ascorbic acid is known to accelerate wound healing. **HCAPLUS abstract 2002:570068** discloses that topically applied ascorbic acid may activate dermal synthesis of elastic fibers and repair photodamaged skin. **HCAPLUS abstract 2003:206436** discloses that ascorbic acid, a potent extracellular antioxidant, is known to have beneficial effects on wound healing and the immune response. Low plasma levels of ascorbic acid follows trauma and infection.

Medline abstract 85057613 discloses sodium bicarbonate to have antibacterial activity against various microorganisms, which activity is due to the bicarbonate ion. "The higher the concentration of bicarbonate, the faster the lethality." Sodium

¹ The original JP patent document is cited. JPAB English abstract JP02002284667A and machine translation are further provided to explain the disclosure of the cited JP document.

bicarbonate is disclosed as advantageous over other agents for its safety, availability and low cost. **Medline abstract 2002276939** discloses antibacterial activity of sodium bicarbonate and suggests high concentrations for decreased levels of cariogenic *Streptococcus mutans* in saliva and plaque.

The difference between JP 2002-284667 and the instant claims is that JP 2002-284667 does not expressly disclose all the components (B) and (C) in applicant's claims at the claimed weight ratios. However, the skin disinfecting liniment of JP 2002-284667 teaches the use of ascorbates (component (B)) and other antiseptics or germicides. Use of an ascorbate such as the alkali metal ascorbates that are readable on the claims would have been fairly suggested by the direct teachings of JP 2002-284667 and also by the known benefit of ascorbic acid for healing of wounds. Incorporation of sodium bicarbonate (component (C)) would have been fairly suggested by its known antibacterial activity and faster lethality at high concentrations.

JP 2002-284667 discloses as little as 10^{-7} % up to 5% trivalent (ferric) iron salt, ascorbic acid or its salt, and other antiseptics or germicides. Ferric chloride would have been an obvious iron salt to use due to its physiologically acceptable chloride anion. As for the amount of the sodium bicarbonate and ascorbate relative to ferric chloride, high concentrations of sodium bicarbonate for antibacterial activity are already known and amount of ascorbate would have been within the skill of the ordinary skilled artisan upon routine experimentation and optimization, based on the less than 2% taught by JP 2002-284667. Given the extremely dilute and broad concentration range of ferric salts taught by JP 2002-284667, the claimed relative concentrations of ascorbates and

Art Unit: 1616

sodium bicarbonate would have been obvious from the suggested concentrations of the prior art, and expectation of predictable result would have been obtained since both ascorbates and sodium bicarbonate would provide the wound treatment or antimicrobial functionality for which they are known in the art. Use of ferric salts at the lower end of the disclosed range in JP 2002-284667 would have suggested the relative ratios claimed in the instant claims. As teachings of JP 2002-284667 encompasses all such ratios, the ordinary skilled artisan would have expected to predictable result of providing a useful skin disinfecting liniment at such claimed ratios.

Claim 17 is noted, but the film feature is fairly suggested by a liniment.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is (571)272-0620. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Johann Richter, can be reached on (571)272-0646.

The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Art Unit: 1616

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John Pak
Primary Examiner
Technology Center 1600